



CLEANUP – CLEAN AIR

DIESEL EMISSIONS & GREENHOUSE GAS REDUCTIONS

Clean Diesel Technologies & Alternative Fuels

The goal of Cleanup—Clean Air is to encourage, facilitate, and support diesel emissions and greenhouse gas reductions technologies and practices at Superfund cleanup and redevelopment sites.

How can Superfund Reduce Diesel Pollution?

RETROFIT engines with diesel emission control technologies
MAINTAIN in accordance with engine manual (i.e., change air filters, check engine timing, fuel injectors and pumps) and keep engines well tuned

REFUEL with biodiesel, other alternative fuels, or with cleaner fuels such as Ultra Low Sulfur Diesel (ULSD)

MODIFY OPERATIONS by reducing operating and idle time

REPLACE existing engines with new cleaner diesel engines, hybrid engines, or engines compatible with alternative fuels.

Why Use Clean Diesel Equipment?

- Exposure to diesel emissions such as particulate matter (PM) can have serious health effects, e.g. asthma attacks, heart attacks.
- Diesel exhaust is a “likely human carcinogen.”
- Exposure to diesel emissions is of concern for site workers and surrounding communities.
- Diesel engines emit hydrocarbons (HC) and nitrogen oxides (NOx) which contribute to smog, and carbon monoxide (CO), a poisonous gas.

What are Some Retrofit Options?

The most common options are Diesel Particulate Filters (DPFs) and Diesel Oxidation Catalysts (DOCs), both of which fit on engines like mufflers.

Retrofit Device	Reductions	Cost/retrofit
DPF	PM 90% HC 90% CO 60-90%	\$7,000—\$10,000
DOC	PM 20-50% HC 50% CO 40%	\$500—\$2,000

What are Some Alternative Fuel Options?

Alternative Fuel	Reductions	Cost/gal vs. diesel
B20 Biodiesel*	PM 10% CO 11% HC 20%	20¢ less – 40¢ more
Emulsified Fuel	PM 16-58% NOx 9-20% CO 13%	~ 20¢ more
Natural Gas	PM 99% NOx 25-60% CO 90-97% HC 50-75%	~\$1 less

*Blend of 20% biodiesel, 80% diesel. Further research is needed but some studies have shown slight increases in NOx when burning biodiesel.

Funding Sources

- Carl Moyer Program (CA only): www.arb.ca.gov/msprog/moyer/moyer.htm
- National Clean Diesel Campaign (EPA): www.epa.gov/cleandiesel
- Congestion Mitigation and Air Quality Program (CMAQ): www.fhwa.dot.gov/environment/cmaqpgs/



Cleanup-Clean Air website:
www.epa.gov/region9/cleanup-clean-air

For general information visit:
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